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Cosmetic or dermatological composition in the form of a gel comprising, as a mixture, an associative copolymer, a surfactant and an insoluble conditioning agent

5           The subject-matter of the present invention is a cosmetic or dermatological composition for topical application which is provided in the form of an aqueous gel comprising at least one associative copolymer, at least one surface-active agent of non-ionic type and at  
10   least one insoluble conditioning agent chosen from silicones, hydrocarbons, fatty alcohols and fatty esters.

          The expression "associative copolymer" is understood to mean, according to the invention, an  
15   amphiphilic copolymer simultaneously comprising hydrophilic units and hydrophobic units.

          It is already known to prepare gels of high viscosity from associative copolymers with a low proportion of a surface-active agent.

20           However, it has been found that these gels, although they constitute good vehicles for various cosmetic or dermatological applications, nevertheless exhibit a poor texture, rendering the gels difficult to pick up by the users.

25           After various studies on these gels, it has been found, surprisingly and unexpectedly, that it is possible to improve the texture thereof and thus to render them more pleasant on and easier to apply to the skin, and more particularly the hair, by combining them  
30   with a certain percentage of an insoluble conditioning agent chosen from silicones, hydrocarbons, fatty alcohols and fatty esters.

          This is because it has been found that the improvement in the quality of the gels is markedly  
35   greater when a conditioning agent as defined above is used, in comparison, for example, with a natural oil, such as a vegetable oil.

          Furthermore, this improvement proved to result from the specific choice of the surface-active agent

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used. This is because it has been found that use of other surfactants does not make it possible to lead to satisfactory results with regard to the properties of the gels obtained.

5           The subject-matter of the present invention is therefore a cosmetic or dermatological composition for topical application in the form of an aqueous gel comprising:

10           (a) at least one associative copolymer chosen from non-crosslinked copolymers of type acrylic with a hydrophobic chain, in a proportion of 0.8 to 20% by weight with respect to the total weight of the composition,

15           (b) at least one surface-active agent of the nonionic type, in a ratio of 1/20 to 1/5 with respect to the associative copolymer but present in a proportion of less than 1% by weight with respect to the total weight of the composition, and

20           (c) at least one insoluble conditioning agent chosen from a silicone, a hydrocarbon, a fatty alcohol or a fatty ester, the said conditioning agent being present in a proportion of 0.01 to 20% by weight with respect to the total weight of the composition.

25           The gels according to the invention exhibit viscoelastic behaviour. They are preferably characterized by a loss angle  $\delta < 35$  and more particularly  $< 30$  in the  $10^{-2}$  to 10 Hz frequency range and by a value of the complex modulus  $G^* < 200 \text{ N/m}^2$  in the  $10^{-2}$  to 10 Hz frequency range, preferably by a value  
30           of the complex modulus  $G^* > 100 \text{ N/m}^2$  at 10 Hz. The measurements are carried out at 25°C using a controlled-stress rheometer (Carrimed CSHR 100).

35           The proportion of non-crosslinked copolymer of the type acrylic with a hydrophobic chain is preferably between 1 and 10% by weight with respect to the total weight of the composition.

          The expression "hydrophobic chain" should be understood as meaning, according to the invention, a

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Mention may in particular be made, among non-crosslinked copolymers of the type acrylic with a hydrophobic chain, of those chosen from the group composed of:

- acrylic acid/lauryl (meth)acrylate copolymers, such as the products "Coatex SX<sup>®</sup>" sold by the Company Coatex;

20 - methacrylic acid/ethyl acrylate/  
polyoxyethylenated lauryl acrylate terpolymers, such as  
the product "Rheo 2000®" sold by the Company Coatex;

- (meth)acrylic acid/ethyl acrylate/  
polyoxyethylenated nonylphenol acrylate copolymers,  
such as the product "Rheo 3000®" sold by the Company  
30 Coatex;

- (meth)acrylic acid/butyl acrylate/hydrophobic monomer comprising a fatty chain copolymers, such as the product "8069-146A<sup>®</sup>" sold by the Company National Starch;

- acrylic acid/C<sub>8</sub>-C<sub>20</sub> (preferably C<sub>19</sub>) alkyl acrylate/polyethylene glycol acrylate (preferably from 20 to 30 mol of ethylene oxide) terpolymers, such as the product "Dapral GE 202®" sold by the company Akzo;

5           - (meth)acrylic acid/C<sub>1</sub>-C<sub>22</sub> alkyl acrylate/amphiphilic monomer comprising a C<sub>8</sub>-C<sub>22</sub> hydrocarbon-comprising chain (for example alkyl or alkenyl) comprising urethane groups copolymers, such as the product "Additol VXW 1312®" sold by the company  
10 Hoechst, and

- acrylic polymers modified by hydrophobic groups with a fatty chain (C<sub>8</sub>-C<sub>22</sub> hydrocarbon-comprising chain, such as alkyl or alkenyl), such as the product "CS-0406®" sold by the company Röhm & Haas.

15           Of course, the copolymers described above can be used alone or in a mixture.

          The surface-active agent according to the invention of the ~~nonionic type~~ of the compositions according to the invention is preferably chosen from  
20   alcohols, α-diols, alkylphenols or fatty acids, these being polyethoxylated, polypropoxylated or polyglycerolated and having a fatty chain comprising from 8 to 28 carbon atoms, it being possible for the number of ethylene or propylene oxide groups to range  
25   from 2 to 50 and that of glycerol in particular from 2 to 30, copolymers of ethylene and propylene oxide, condensates of ethylene and propylene oxide with fatty alcohols, polyethoxylated fatty amines or amides preferably having from 2 to 30 mol of ethylene oxide,  
30   polyglycerolated fatty amides comprising on average 1 to 5 glycerol groups, polyglycerolated diglycolamides, optionally oxyethylenated fatty acid esters of sorbitan, fatty acid esters of sucrose, polyoxyalkylenated fatty acid esters, optionally  
35   oxyalkylenated alkyl polyglycosides, esters of alkyl glucosides, N-alkylglucamine and N-acylmethylglucamine derivatives, aldobionamides and amine oxides.

          Mention may in particular be made, among surface-active agents of the nonionic type which are

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particularly preferred, of esters of sorbitol and of C<sub>8</sub>-C<sub>22</sub> fatty acids which are optionally oxyethylenated or of (C<sub>8</sub>-C<sub>22</sub>)alkyl polyglucosides, such as the product sold under the name of "APG 300 Glycoside®" by the company Henkel.

The surface-active agent of nonionic type can optionally, according to the invention, be used in combination with a surface-active agent of the anionic or amphoteric type.

Mention may particularly be made, among surface-active agents of the anionic type, of the salts, in particular the alkali metal and especially sodium salts, the ammonium salts, the amine salts, the aminoalcohol salts or the magnesium salts of the following compounds: alkyl sulphates, alkyl ether sulphates, alkylamido ether sulphates, monoglyceride sulphates, alkyl glyceryl sulphonates, alkyl sulphonates, alkyl phosphates, alkylamide sulphonates, alkylaryl sulphonates,  $\alpha$ -olefin sulphonates, paraffin sulphonates, alkyl sulphosuccinates, alkyl ether sulphosuccinates, alkylamide sulphosuccinates, alkylsulphosuccinamates, alkyl sulphoacetates, alkyl ether phosphates, acylisethionates, N-acyltaurates or N-acylamino acids, such as N-acylsarcosinates and N-acylglutamates. Mention may also be made, as anionic surface-active agents which can be used in the compositions according to the invention, of the salts of fatty acids, such as the salts of undecenylic, oleic, ricinoleic, palmitic and stearic acids, coconut oil or hydrogenated coconut oil acids and acylhydroxy acids, such as acyllactylates. Use may also be made of weakly anionic surface-active agents, such as alkyl D-galactoside uronic acids and their salts, as well as polyoxyalkylenated alkylamido ether carboxylic alkyl ether acids or their salts, the alkyl or acyl radical of these various compounds preferably comprising from 8 to 22 carbon atoms, and anionic derivatives of (C<sub>8</sub>-C<sub>22</sub>)alkyl polyglycosides (sulphate, sulphosuccinate,

phosphate, isethionate, ether carboxylate or carbonate).

5 Mention may be made, among surface-active agents of the amphoteric type, of derivatives of secondary or tertiary aliphatic amines in which the aliphatic radical is a linear or branched chain comprising 8 to 22 carbon atoms and comprising at least one water-solubilizing anionic group, such as, for example, a carboxylate, sulphonate, sulphate, phosphate  
10 or phosphonate group. Mention may also be made, among surface-active agents of amphoteric or zwitterionic type, of sulphobetaines, alkyl amidoalkyl betaines, alkyl amidoalkyl sulphobetaines or imidazolium derivatives, such as those of amphocarboxyglycinate or  
15 amphocarboxypropionate.

The expression "insoluble conditioning agent" is understood as meaning, according to the invention, a silicone, a hydrocarbon, a fatty alcohol or a fatty ester which is insoluble or essentially insoluble in  
20 water (solubility of less than 0.5% by weight).

When the conditioning agent of the composition according to the invention is a silicone, the latter is generally present in the composition according to the invention in a proportion preferably of between 0.05  
25 and 5% by weight with respect to the total weight of the composition.

The silicones or organopolysiloxanes used in the composition according to the present invention are organopolysiloxane oils or organosiloxane gum or resin  
30 organic solutions.

Mention may be made, among the organosiloxanes used in accordance with the present invention, without implied limitation, of:

35 I. Volatile silicones

These have a boiling point of between 60°C and 260°C. Mention is made, among silicones of this type, of:

(i) cyclic silicones comprising 3 to 7 silicon atoms and preferably 4 to 5 silicon atoms. It is, for example, the octamethylcyclotetrasiloxane sold under the name of "Volatile Silicone 7207<sup>®</sup>" by the company Union Carbide or "Silbione 70045 V2<sup>®</sup>" by the company Rhône-Poulenc or the decamethylcyclopentasiloxane sold under the name of "Volatile Silicone 7158<sup>®</sup>" by the company Union Carbide or "Silbione 70045 V5<sup>®</sup>" by the company Rhône-Poulenc, as well as their mixtures.

Mention is also made of cyclopolymers of the dimethylsiloxane/methylalkylsiloxane type, such as "Silicone Volatile FZ 3109<sup>®</sup>", sold by the company Union Carbide, which is a dimethylsiloxane/methyloctylsiloxane cyclocopolymer;

(ii) volatile linear silicones having 2 to 9 silicon atoms and possessing a viscosity of less than or equal to  $5 \times 10^{-6}$  m<sup>2</sup>/s at 25°C. It is, for example, the hexamethyldisiloxane sold under the name "Silbione 70041 V0.65<sup>®</sup>" by the company Rhône-Poulenc. This type of product is described in the article by Todd & Byers, "Volatile silicone fluids for cosmetics", Cosmetics and Toiletries, Vol. 91, Jan 76, pages 27-32.

## II. Non-volatile silicones

They are composed mainly of polyalkylsiloxanes, polyarylsiloxanes, polyalkylarylsiloxanes, silicone gums and resins and organomodified polysiloxanes, as well as their mixtures.

Mention may be made, among polyalkylsiloxanes, mainly of linear polydimethylsiloxanes with a viscosity of greater than  $5 \times 10^{-6}$  m<sup>2</sup>/s and preferably of less than 2.6 m<sup>2</sup>/s, i.e.:

- with terminal trimethylsilyl groups, such as, for example, without implied limitation, the "Silbione<sup>®</sup>" oils of the 70047 series which are sold by the company Rhône-Poulenc, the "47 V 500,000<sup>®</sup>" oil from Rhône-Poulenc or certain "Viscasil<sup>®</sup>" products from the company General Electric,

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- with terminal trihydroxysilyl groups, such as the oils of the "48 V<sup>®</sup>" series from the company Rhône-Poulenc.

5       Mention may also be made, in this class of polyalkylsiloxanes, of the polyalkylsiloxanes sold by the company Goldschmidt under the names "Abilwax 9800<sup>®</sup>" and "Abilwax 9801<sup>®</sup>", which are poly(C<sub>1</sub>-C<sub>20</sub>)alkylsiloxanes.

10       Mention may be made, among polyalkylaryl-siloxanes, of linear and/or branched polydimethyldiphenylsiloxanes or polydimethylphenyl-siloxanes with a viscosity of 10<sup>-5</sup> to 5 × 10<sup>-2</sup> m<sup>2</sup>/s at 25°C, such as, for example:

- 15       - the "Rhodorsil<sup>®</sup> 763" oil from Rhône-Poulenc,
- the "Silbione<sup>®</sup>" oils of the 70641 series from Rhône-Poulenc, such as the "Silbione 70641 V30<sup>®</sup>" and "Silbione 70641 V200<sup>®</sup>" oils from Rhône-Poulenc,
- the product "DC 556 Cosmetic Grade Fluid<sup>®</sup>" from Dow Corning,
- 20       - the silicones of the PK series from Bayer, such as "PK20<sup>®</sup>",
- the silicones of the PN and PH series from Bayer, such as "PN 1000<sup>®</sup>" and "PH 1000<sup>®</sup>",
- 25       - certain oils of the SF series from General Electric, such as "SF 1250<sup>®</sup>", "SF 1265<sup>®</sup>", "SF 1154<sup>®</sup>" and "SF 1023<sup>®</sup>".

30       The silicone gums, in accordance with the present invention, are polydiorganosiloxanes with a high number-average molecular mass of between 200,000 and 1,000,000, used alone or as a mixture in a solvent chosen from volatile silicones, polydimethylsiloxane (PDMS) oils, polyphenylmethyl-siloxane (PPMS) oils, isoparaffins, methylene chloride, pentane, dodecane, tridecane, tetradecane or their mixtures.

35       Mention is made, for example, of the following compounds:

- poly[(dimethylsiloxane)/(methylvinylsiloxane)],
- poly[(dimethylsiloxane)/(diphenylsiloxane)],



- poly[(dimethylsiloxane)/(phenylmethylsiloxane)],
- poly[(dimethylsiloxane)/(diphenylsiloxane)/methylvinylsiloxane)].

5           Mention may be made, for example, without implied limitation, of the following mixtures:

1) the mixtures formed from a polydimethylsiloxane hydroxylated at the chain end (Dimethiconol, according to the CTFA nomenclature) and from a cyclic  
10 polydimethylsiloxane (Cyclomethicone, according to the CTFA nomenclature), such as the product "Q2 1401<sup>®</sup>" sold by the company Dow Corning;

2) the mixtures formed from a polydimethylsiloxane gum with a cyclic silicone, such as the  
15 product "SF 1214 Silicone Fluid<sup>®</sup>" from General Electric, which is an "SE 30<sup>®</sup>" gum with an MW of 500,000 ( $\overline{M}_n$ ) dissolved in "SF 1202 Silicone Fluid<sup>®</sup>" (decamethylcyclopentasiloxane);

3) the mixtures of two PDMS with different  
20 viscosities, in particular of a PDMS gum and of a PDMS oil, such as the products "SF 1236<sup>®</sup>" and "CF 1241<sup>®</sup>" from the company General Electric. The product "SF 1236<sup>®</sup>" is the mixture of an "SE 30<sup>®</sup>" gum defined above, with a viscosity of 20 m<sup>2</sup>/s, and of an "SF 96<sup>®</sup>" oil,  
25 with a viscosity of  $5 \times 10^{-6}$  m<sup>2</sup>/s (15% of "SE 30<sup>®</sup>" gum and 85% of "SF 96<sup>®</sup>" oil).

The product "CF 1241<sup>®</sup>" is the mixture of an "SE 30<sup>®</sup>" gum (33%) and of a PDMS (67%) with a viscosity of  $10^{-3}$  m<sup>2</sup>/s.

30           The organopolysiloxane resins which can be used in accordance with the invention are crosslinked siloxane systems including the units:  $R_2SiO_{2/2}$ ,  $RSiO_{3/2}$  and  $SiO_{4/2}$ , in which R represents a hydrocarbon-comprising group having 1 to 6 carbon atoms or a phenyl  
35 group. The products which are particularly preferred among these are those in which R denotes a lower alkyl radical or a phenyl radical.

Mention may be made, among these resins, of the product sold under the name "Dow Corning 593<sup>®</sup>" or those

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sold under the names "Silicone Fluid SS 4230" and "Silicone Fluid SS 4267" by the company General Electric, which are dimethyl/trimethylpolysiloxanes.

The organomodified silicones, in accordance with the present invention, are silicones as defined above comprising, in their general structure, one or more organofunctional groups directly attached to the siloxane chain or attached via a hydrocarbon-comprising radical.

Mention is made, for example, of the silicones comprising:

a) perfluorinated groups, such as trifluoroalkyl groups, such as, for example, those sold by the company General Electric under the names "FF.150 Fluorosilicone Fluid<sup>®</sup>" or by the company Shin Etsu under the names "X-22-819<sup>®</sup>", "X-22-82<sup>®</sup>", "X-22-821<sup>®</sup>" and "X-22-822<sup>®</sup>";

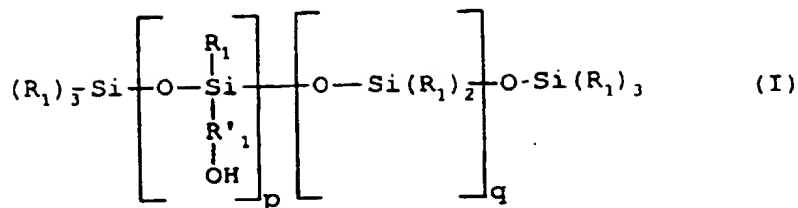
b) hydroxyacylamino groups, such as, for example, those disclosed in Patent Application EP-A-0,342,834 and in particular the silicone sold by the company Dow Corning under the name "Q2-8413<sup>®</sup>";

c) thiol groups, as in the "X2-8360<sup>®</sup>" silicones from the company Dow Corning or "GP 72A<sup>®</sup>" and "GP 71<sup>®</sup>" from Genesee;

d) substituted or unsubstituted amino groups, as in "GP 4 Silicone Fluid<sup>®</sup>" from Genesee, "GP 7100<sup>®</sup>" from Genesee, "Q2 8220<sup>®</sup>" from Dow Corning, "AFL 40<sup>®</sup>" from Union Carbide or the silicone named "Amodimethicone" in the CTFA dictionary;

e) carboxylate groups, such as the products disclosed in Patent EP 186,507 of Chisso Corporation;

f) hydroxylated groups, such as the polyorganosiloxanes with a hydroxyalkyl functional group, disclosed in Patent Application FR-85 16334, corresponding to the following formula:



in which:

- the  $R_1$  radicals, which are identical or different, are chosen from the methyl and phenyl radicals, at least 60 mol% of the  $R_1$  radicals being methyl;

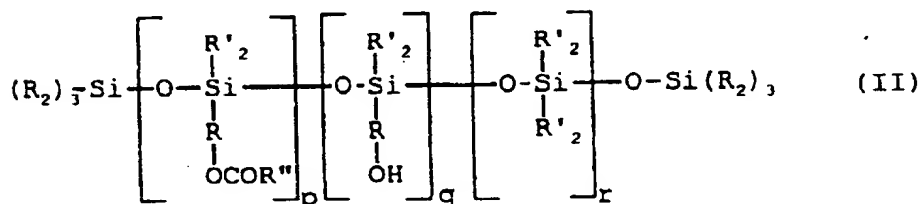
- the  $R'_1$  radical is a divalent  $C_2-C_{18}$  hydrocarbon-comprising alkylene linkage;

-  $p$  is between 1 and 30 inclusive;

-  $q$  is between 1 and 150 inclusive;

g) alkoxyalkyl groups, as in "Silicone copolymer F 755<sup>®</sup>" from SWS Silicones and the products "Abilwax 2428<sup>®</sup>", "Abilwax 2434<sup>®</sup>" and "Abilwax 2440<sup>®</sup>" from the company Goldschmidt;

h) acyloxyalkyl groups, such as, for example, the polyorganopolysiloxanes disclosed in Patent Application FR-88 17433, corresponding to the following formula:



in which:

-  $R_2$  denotes methyl, phenyl,  $OCOR''$  or hydroxyl, it being possible for only one of the  $R_2$  groups per silicon atom to be OH;

-  $R'_2$  denotes methyl or phenyl, at least 60 mol% of the combined  $R_2$  and  $R'_2$  radicals being methyl;

-  $R''$  denotes  $C_8-C_{20}$  alkyl or alkenyl;

-  $R$  denotes a linear or branched divalent  $C_2-C_{18}$  hydrocarbon-comprising alkylene;

-  $r$  is between 1 and 120 inclusive;

- p is between 1 and 30 inclusive;
- q has the value 0 or is less than 0.5 p, p + q being between 1 and 30 inclusive;

5       - it being possible for the polyorganosiloxanes  
of formula (II) to comprise groups in

proportions not exceeding 15% of the sum p + q + r;

10       i) quaternary ammonium groups, as in the  
products "X2 81 08<sup>®</sup>" and "X2 81 09<sup>®</sup>", or the product  
"Abil K 3270<sup>®</sup>" from the company Goldschmidt;

      j) amphoteric or betaine groups, such as in the  
product sold by the company Goldschmidt under the name  
"Abil B 9950<sup>®</sup>"

15       k) bisulphite groups, such as in the products  
sold by the company Goldschmidt under the names "Abil S  
201<sup>®</sup>" and "Abil S 255<sup>®</sup>".

The polyorganosiloxanes which are particularly  
preferred according to the present invention are chosen  
from:

20       1) non-volatile silicones of the type linear  
polyalkylsiloxane comprising terminal trimethylsilyl  
groups, such as the "Silbione<sup>®</sup>" oils of the 70047 and  
47 series, such as the "47 V 500,000<sup>®</sup>" oil, which are  
sold by the company Rhône-Poulenc, or of the  
25       polyalkylarylsiloxane type, such as the "Silbione 70641  
V 200<sup>®</sup>" oil from the company Rhône-Poulenc;

      2) mixtures of organosiloxanes and of cyclic  
silicones, such as "Q2 1401<sup>®</sup>" from the company Dow  
Corning or "SF 1214 Silicone Fluid<sup>®</sup>" from the company  
30       General Electric;

      3) fluorosilicones of type polyalkylsiloxane  
comprising terminal trimethylsilyl groups and  
substituted on the chain by trifluoropropyl groups,  
such as the fluorosilicone sold by the company Shin  
35       Etsu under the name "X-22-821<sup>®</sup>".

When the conditioning agent of the composition  
according to the invention is a hydrocarbon, the latter  
can be a linear or branched C<sub>8</sub>-C<sub>300</sub> hydrocarbon. Mention  
may in particular be made, among hydrocarbons which are

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liquid at room temperature corresponding to this definition, of isododecane, isohexadecane and its isomers (such as 2,2,4,4,6,6-heptamethylnonane), isoicosane, isotetracosane and the isomers of the said compounds. Use is preferably made, according to the invention, of isododecane or one of its isomers.

When the conditioning agent is a fatty alcohol, the latter is of the saturated or unsaturated, linear or branched C<sub>8</sub>-C<sub>22</sub> type and mention may be made, among these, of 2-butyloctanol, lauryl alcohol, oleyl alcohol, isocetyl alcohol and isostearyl alcohol.

When the conditioning agent is a fatty ester, the latter can be either an ester of a C<sub>8</sub>-C<sub>22</sub> fatty acid and of a C<sub>1</sub>-C<sub>22</sub> alcohol or an ester of a C<sub>1</sub>-C<sub>7</sub> acid or diacid and of a C<sub>8</sub>-C<sub>22</sub> fatty alcohol. Mention may be made, among these esters, of ethyl, isopropyl, 2-ethylhexyl and 2-octyldecyl palmitate, isopropyl, butyl, cetyl and 2-octyldecyl myristate, butyl and hexyl stearate, hexyl and 2-hexyldecyl laurate, isononyl isononanoate and dioctyl malate.

The hydrocarbons, the fatty alcohols and the fatty esters and their mixtures are, just like the silicones, preferably present in a proportion of between 0.05 and 5% by weight with respect to the total weight of the composition.

Various active substances having a cosmetic or dermatopharmaceutical advantage can be introduced into the compositions in aqueous gel form according to the invention.

Mention may be made, among these active substances, by way of example, of:

- agents modulating cutaneous differentiation and/or proliferation and/or pigmentation, such as retinoic acid and its isomers, retinol and its esters, vitamin D and its derivatives, oestrogens, such as oestradiol, kojic acid or hydroquinone;

- antibacterials or antibiotics, antiparasitics, antifungals, antiviral agents, steroidal anti-inflammatory agents or non-steroidal

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anti-inflammatory agents, substances such as substance P, CGRP or bradykinin antagonists or NO-synthase inhibitors, anaesthetic agents or antipruritic agents.

Mention may be made, as other active substances, of:

- keratolytic agents, such as  $\alpha$ - and  $\beta$ -hydroxycarboxylic or  $\beta$ -ketocarboxylic acids, their salts, amides or esters and more particularly hydroxy acids, such as glycolic acid, lactic acid, salicylic acid, citric acid and fruit acids generally, and 5-(n-octanoyl)salicylic acid;

- agents for combating free radicals, antiseborrhoeic agents, antiacne agents, pyrimidine derivatives, such as 2,4-diamino-6-piperidinopyrimidine 3-oxide or "Minoxidil" or also its numerous derivatives, agents promoting hair regrowth, such as those disclosed in Patent Application EP 0,648,488, calcium-antagonist agents, hormones or antiandrogen agents.

The compositions according to the invention can also comprise various adjuvants used in particular in cosmetics, such as fragrances, preservatives, sunscreen agents, sequestering agents, colorants, acidifying or basifying agents, moisturizers or emollients, reducing agents, oxidizing agents, non-oily agents for conditioning the hair or the skin, as well as other adjuvants, according to the use envisaged.

Several examples of the composition according to the invention will now be given by way of illustration.

EXAMPLES

EXAMPLE 1: Leave-in care gel

5 A leave-in gel is prepared by mixing the following ingredients:

- Acrylic acid/C<sub>1</sub>-C<sub>18</sub> alkyl acrylate/stearyl methacrylate polyoxyethylenated with 20 mol of ethylene oxide terpolymer, sold under the name of "Acrysol ICS-1®" by the company Röhm & Haas ..... 1.0 g
- Lauryl ester of sorbitol oxyethylenated with 20 mol of ethylene oxide (Tween 20) ..... 0.1 g
- 2-Butyloctanol (Isofol 12) ..... 2.0 g
- 2-Amino-2-methyl-1-propanol q.s. pH 7.5
- Water ..... q.s. for 100.0 g

10 The gel obtained exhibits an excellent texture and is particularly easy to apply to the hair.

EXAMPLE 2: Leave-in care gel

- Acrylic acid/C<sub>1</sub>-C<sub>18</sub> alkyl acrylate/stearyl methacrylate polyoxyethylenated with 20 mol of ethylene oxide terpolymer, sold under the name of "Acrysol ICS-1®" by the company Röhm & Haas ..... 2.0 g
- Decyl polyglucose, sold under the name of "APG 300 Glycoside®" by the Company Henkel .. 0.2 g
- $\alpha,\omega$ -Di-OH-polydimethylsiloxane at a 14% solution in the cyclotetra/cyclopentadi-methylsiloxane mixture ("Q2-1401®" from Dow Corning) ..... 20.0 g
- 2-Amino-2-methyl-1-propanol q.s. pH 7.5
- Water ..... q.s. for 100.0 g

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EXAMPLE 3: Leave-in care gel

- (Meth)acrylic acid/C<sub>8</sub>-C<sub>22</sub> alkyl acrylate/  
polyoxyethylenated C<sub>1</sub>-C<sub>22</sub> alkyl allyl ether  
terpolymer, sold under the name of "Rheovis-  
CR<sup>®</sup>" by the Company Allied Colloids ..... 4.0 g
- Decyl polyglucose, sold under the name of  
"APG 300 Glycoside<sup>®</sup>" by the Company Henkel . 0.2 g
- Polydimethylsiloxane with a viscosity of 500  
cSt, sold under the name of "Mirasil DM  
500<sup>®</sup>" by the Company Rhône-Poulenc ..... 3.0 g
- 2-Amino-2-methyl-1-propanol q.s. pH 7.5
- Water ..... q.s. for 100.0 g

EXAMPLE 4: Leave-in care gel

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- Methacrylic acid/ethyl acrylate/  
polyoxyethylenated nonylphenol acrylate  
terpolymer, sold under the name of "Rheo  
3000<sup>®</sup>" by the Company Coatex ..... 2.0 g
- Lauryl ester of sorbitol oxyethylenated with  
20 mol of ethylene oxide (Tween 20) ..... 0.4 g
- Isohexadecane ..... 2.0 g
- 2-Amino-2-methyl-1-propanol q.s. pH 7.5
- Water ..... q.s. for 100.0 g

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